

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Hirofumi Yura et al.

Serial No.: 09/937,510

Filing Date: September 25, 2001

Title: "METHOD FOR SELECTIVELY SEPARATING BLOOD
CELLS BY USING LECTIN"

Docket No.: 33947

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENTBox PCT
Asst. Commissioner for Patents
Washington, D.C. 20231

Sir/Madam:

Pursuant to Rule 56, applicants are submitting the enclosed PTO Form 1449, along with a copy of each reference cited therein. In this Supplemental Information Disclosure Statement, and the prior Information Disclosure Statement mailed January 31, 2002, three (3) Japanese publications were listed:

Publication 1: JP-H08-319300

Publication 2: Tatsuya Saito, et al., "An Efficient Method of Bone Marrow Transplant II. Design of Absorbent Column for Depletion of T Lymphocytes and Concentration of Stem Cells from Donor Bone Marrow"

Publication 3: Arnon Nagler, et al., "The Use of Soybean Agglutinin (SBA) for Bone Marrow (BM) Purging and Hematopoietic Progenitor Cell Enrichment in Clinical Bone-Marrow Transplantation"

The following information is provided regarding these publications:

Publication 1 describes a method for immobilizing lectins to a solid support via a glycoconjugate polymer coated on the solid support. Publication 1 also describes that thus prepared solid support

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Jeffrey J. Sopko

Name of Attorney for Applicant(s)

June 27, 2002

Date

Signature of Attorney

containing carbohydrate moieties as a surface thereof can be used as a base material for cell culture and that CD3 cells were selectively immobilized onto the solid support through an interaction between the CD3 cells and the lectins. However, Publication 1 neither discloses nor suggests an interaction of blood cells and unimmobilized lectins under the condition of making the blood cells inactive as step (1) of the present invention.

Publication 2 describes a method for depleting T lymphocytes and concentrating stem cells from donor bone marrow in order to improve bone marrow transplantation. In an experiment, a separating material comprising glycoconjugate polymers coated on polymeric beads was prepared. This separating material was packed in a column for separating subsets of T-lymphocytes in the presence of lectins in free form. However, Publication 2 also does not suggest an interaction between the lectins and blood cells under the condition of making the blood cells inactive as step (1) of the present invention.

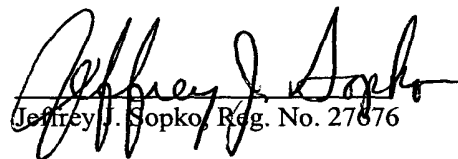
Publication 3, also relates to separation of T cell subsets as in Publication 2. Publication 3 describes an interaction between T cells and immobilized lectins at 4°C. However, Publication 3 does not disclose the glycoconjugate polymer itself. Therefore, lectins in Publication 3 are immobilized on polymeric beads via covalently binding linkers rather than the glycoconjugate polymer.

In conclusion, none of Publications 1-3 describes cell-lectin complexes/non-complexes prepared under the condition of making the cells inactive and then incubating the complexes/non-complexes with glycoconjugate polymers immobilized on a solid support.

Respectfully submitted,

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Form PTO-1449	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY: DOCKET NO. 33947	SERIAL NO. 09/937,510
INFORMATION DISCLOSURE CITATION BY APPLICANT (USE SEVERAL SHEETS IF NECESSARY)		APPLICANT: Hirofumi Yura et al.	
		FILING DATE: September 25, 2001	GROUP ART UNIT:

U.S. PATENT DOCUMENTS

Examiner Initial		Document No.	Date	Name	Class	Subclass	Filing Date
	A						
	B						
	C						
	D						
	E						
	F						
	G						
	H						
	I						

FOREIGN PATENT DOCUMENTS

	J	Document No.	Date	Country	Class	Subclass	Translation
	K	8-319300	12/1996	Japan			Cited on ISR
	L						
	M						
	N						

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)^{*}

	P	Tatsuya Sato et al., "An Efficient Method of Bone Marrow Transplantation II. Design of Absorbent Column for Depletion of T Lymphocytes and Concentration of Stem Cells from Donor Bone Marrow", Journal of Tokyo Jikeikai Ika Daigaku, 1996, Vol. 11, No. 1, p. 9-18.
	Q	Arnon Nagler, et al., "The Use of Soybean Agglutinin (SBA) for Bone Marrow (BM) Purging and Hematopoietic Progenitor Cell Enrichment in Clinical Bone-Marrow Transplantation", Molecular Biotechnology, April 1999, Vol. 11, No. 2, p. 181-194.
	R	

Examiner:	Date Considered
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*Examiner: Initial if reference considered, regardless of whether citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.